

## **Appendix**

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Appendix Table S1: TB patient information

Patients			Sample	Serum Ig			Plasmablasts
TB	Sex	Age	Timepoint	IgG [AUC x10 <sup>-2</sup> ]	IgA [AUC x10 <sup>-3</sup> ]	IgM [AUC x10 <sup>-3</sup> ]	[%]
<b>7*</b>	<b>F</b>	<b>32</b>	<b>BT</b>	<b>1,3</b>	0,6	<b>1,2</b>	<b>1,2</b>
14	M	52	AT (2 m)	<b>1,7</b>	0,5	<b>1,1</b>	0,5
15	F	33	AT (2 m)	0,3	ND	ND	<b>0,8</b>
16	M	50	BT	<b>1,0</b>	<b>1,0</b>	<b>1,1</b>	0,6
17	M	41	BT	<b>1,3</b>	<b>1,4</b>	<b>1,0</b>	0,3
18	M	68	BT	0,2	0,6	<b>1,1</b>	0,0
19	F	44	BT	<b>1,5</b>	ND	ND	0,2
20	F	58	BT	0,5	0,6	0,8	0,2
21	M	55	BT	0,7	ND	ND	<b>3,0</b>
22	M	32	AT (3 m)	<b>1,3</b>	ND	ND	<b>2,5</b>
23	M	52	BT	<b>1,4</b>	0,3	0,6	<b>3,1</b>
<b>24*</b>	<b>F</b>	<b>61</b>	<b>BT</b>	<b>1,1</b>	0,6	0,7	<b>5,0</b>
25	F	38	BT	0,5	<b>1,0</b>	<b>1,1</b>	<b>4,7</b>
26	F	65	BT	<b>1,2</b>	<b>0,7</b>	<b>1,1</b>	0,1
29	M	58	AT (2 wk)	<b>1,1</b>	0,5	0,7	0,6
30	F	30	BT	<b>1,1</b>	<b>0,9</b>	0,9	0,1
31	M	50	AT (2 wk)	<b>1,1</b>	<b>0,8</b>	0,9	<b>1,8</b>
<b>33*</b>	<b>M</b>	<b>25</b>	<b>BT</b>	<b>1,1</b>	0,5	0,6	<b>6,5</b>
34	F	27	AT (2 m)	0,6	ND	ND	0,1
35	?	?	BT	<b>1,2</b>	ND	ND	<b>1,0</b>
36	M	31	BT	0,6	ND	ND	<b>2,4</b>
37	M	34	AT (1 m)	0,7	ND	ND	0,0
39	M	15	BT	0,5	<b>0,8</b>	<b>1,1</b>	0,0
40	M	17	BT	0,4	0,6	<b>1,0</b>	0,6
41	M	30	AT ( wk)	0,6	ND	ND	ND

TB - Tuberculosis; \* - patient selected for mAb cloning; numbers in bold indicate + reactivity/PB population

BT - before treatment; AT - after treatment; m - months; w - weeks; Serum Ig - Ig serum reactivity to MTB whole cell lysate



TB patient	Nr	Isotype Heavy Chain	VH	JH	SHM	CDR3	Isotype Light Chain	VL	JL	SHM	MTB lysate	MTB bacteria	Cross-reactive	MTB Cell Membrane	ManLAM	BCG bacteria (FACS)	Esat-6	Ag85B
Pat TB33	003	IgA1	IGHV3-23*01	IGHJ4*02	6	GRYTYGYFFDY	kappa	IGKV3-20*01	IGKJ3*01	1	-	-	-					
Pat TB33	010	IgA2	IGHV1-2*02	IGHJ4*02	26	LPYITTSRDF	kappa	IGKV3-20*01	IGKJ4*01	20	+	-	+			-		
Pat TB33	026	IgA1	IGHV3-7*01	IGHJ4*02	26	DPGWGAFDY	kappa	IGKV2-30*02	IGKJ2*01	6	-	-	-					
Pat TB33	032	IgA1	IGHV3-53*01	IGHJ2*01	27	LPLGDWYFDL	lambda	IGLV2-23*02	IGLJ3*02	21	-	-	-					
Pat TB33	033	IgA1	IGHV3-74*03	IGHJ3*01	19	SKLLADDAFDV	kappa	IGKV3-20*01	IGKJ1*01	12	-	-	-					
Pat TB33	052	IgG1	IGHV3-21*01	IGHJ3*01	30	HILGVPGAFHV	kappa	IGKV1-NL1*01	IGKJ2*01	15	+	+	-	-		-		
Pat TB33	055	IgG2	IGHV3-30-3*01	IGHJ4*02	30	RGPFITGRYDFYGEYYFDS	kappa	IGKV1-5*03	IGKJ1*01	14	-	-	-					
Pat TB33	057	IgG1	IGHV3-9*01	IGHJ4*02	32	VSYSSGWYLDH	kappa	IGKV1-27*01	IGKJ2*01	18	-	-	-					
Pat TB33	059	IgA2	IGHV4-39*07	IGHJ4*02	16	YAKYSSTSYPGAFDY	lambda	IGLV2-11*01	IGLJ3*02	5	+	-	-			-		
Pat TB33	064	IgG1	IGHV3-21*01	IGHJ4*02	15	DGRDGYNLNY	lambda	IGLV6-57*01	IGLJ3*02	6	-	-	-					
Pat TB33	066	IgA1	IGHV3-7*01	IGHJ5*02	20	DRTLAA	kappa	IGKV3D-15*01	IGKJ2*01	8	-	-	-					
Pat TB33	091	IgA2	IGHV3-21*01	IGHJ4*02	13	DPPHDYGNNAEDY	kappa	IGKV1-39*01	IGKJ1*01	12	-	-	+					
Pat TB33	093	IgA2	IGHV5-51*01	IGHJ3*01	30	IGAGDSSADAFDV	lambda	IGLV1-47*01	IGLJ1*01	28	+	-	-	-		-		
Pat TB33	103	IgG1	IGHV3-74*01	IGHJ4*02	26	ESYRRFDD	lambda	IGLV2-8*01	IGLJ1*01	3	-	-	-					
Pat TB33	114	IgA1	IGHV3-11*01	IGHJ6*02	13	EPGMERMDV	kappa	IGKV1-16*02	IGKJ2*01	9	-	-	-					
Pat TB33	115	IgA1	IGHV1-3*01	IGHJ3*02	26	TRPYDVLSSLDDAFDL	kappa	IGKV1-39*01	IGKJ4*01	23	-	-	-					
Pat TB33	117	IgA2	IGHV3-15*01	IGHJ4*02	21	SAAAGLPDC	lambda	IGLV1-51*01	IGLJ3*02	8	+	-	+					
Pat TB33	123	IgA1	IGHV3-48*02	IGHJ5*02	29	VGNSAAPDW	lambda	IGLV3-27*01	IGLJ3*02	9	-	-	-		+			
Pat TB33	126	IgG2	IGHV3-21*01	IGHJ4*02	24	DILGASRGFDY	kappa	IGKV3-11*01	IGKJ4*01	8	-	-	-					
Pat TB33	127	IgA1	IGHV7-4-1*02	IGHJ5*02	36	WSCSSGNCYLGH	kappa	IGKV3-20*01	IGKJ4*01	13	-	-	-					
Pat TB33	129	IgA2	IGHV4-39*07	IGHJ6*02	9	RGSGFNGMDV	kappa	IGKV3-20*01	IGKJ2*01	3	+	-	-	-		-		
Pat TB33	137	IgA2	IGHV4-59*01	IGHJ4*02	10	EPSWSGYFDY	kappa	IGKV3-20*01	IGKJ1*01	7	-	-	-					
Pat TB33	138	IgA2	IGHV3-30*18	IGHJ6*02	18	DFIVLDYDEHYGMDV	lambda	IGLV1-44*01	IGLJ3*02	25	-	+	-					
Pat TB33	141	IgG1	IGHV4-31*03	IGHJ4*02	17	GDWNDVHVDF	lambda	IGLV1-40*01	IGLJ1*01	9	-	-	-					
Pat TB33	146	IgG2	IGHV4-39*01	IGHJ5*02	25	GLYNSDWLDP	lambda	IGLV1-51*01	IGLJ3*02	15	-	-	-					
Pat TB33	148	IgA2	IGHV3-73*02	IGHJ4*02	22	RIPNVNDF	lambda	IGLV2-14*01	IGLJ3*02	13	+	+	+					
Pat TB33	152	IgG2	IGHV1-2*02	IGHJ5*02	9	ELGSTGGHWFDP	kappa	IGKV3-20*01	IGKJ1*01	6	-	-	-					
Pat TB33	161	IgA2	IGHV4-39*02	IGHJ4*02	36	DYGFRTDC	kappa	IGKV1-39*01	IGKJ2*04	15	-	-	-					
Pat TB33	180	IgG2	IGHV4-39*01	IGHJ4*02		HRSGSSDFDF	lambda	IGLV2-14*01	IGLJ3*02	22	-	-	-					
Pat TB33	189	IgA1	IGHV3-23*01	IGHJ5*02	30	ICPSQNNWFDA	kappa	IGKV3-11*01	IGKJ5*01	8	+	-	-			-		
Pat TB33	204	IgA1	IGHV4-39*07	IGHJ4*02	32	VLRGADYVDY	lambda	IGLV2-8*01	IGLJ3*02	9	-	-	+					
Pat TB33	247	IgA1	IGHV3-23*05	IGHJ4*02	34	EGYCSGGHCRYFDS	kappa	IGKV3-11*01	IGKJ5*01	20	-	-	-					
Pat TB33	302	IgG2	IGHV3-30-3*01	IGHJ3*02	19	DNDVFQKGNAFDL	lambda	IGLV2-14*01	IGLJ1*01	17	-	-	-					
Pat TB33	319	IgA1	IGHV3-21*01	IGHJ4*02	8	QLQGFYD	lambda	IGLV1-44*01	IGLJ3*02	6	-	-	+					
PatTB24	001	IgA1	IGHV1-3*01	IGHJ6*02	30	ENLRGDYGMVDV	lambda	IGLV2-23*02	IGLJ1*01	13	-	+	-			-		-
PatTB24	009	IgG1	IGHV4-39*01	IGHJ3*02	0	SPRGYSYGLGAFDI	kappa	IGKV3-20*01	IGKJ4*01	0	+	-	+		-		+	+
PatTB24	017	IgA2	IGHV3-23*04	IGHJ4*02	5	VVGTIDPFDF	lambda	IGLV2-14*01	IGLJ2*01	2	-	-	-			-		-
PatTB24	023	IgG1	IGHV3-7*01	IGHJ4*02	16	DPIRSDGHNYDY	kappa	IGKV1-12*01	IGKJ5*01	19	-	+	-	-	-	-	-	-
PatTB24	026	IgA2	IGHV3-30*07	IGHJ6*02	23	GPICITNGDCYSYYYYGLDV	lambda	IGLV2-14*01	IGLJ3*02	13	-	-	-	-		-		-
PatTB24	037	IgA1	IGHV3-53*01	IGHJ4*02	39	RNFHY	lambda	IGLV7-46*01	IGLJ2*01	13	-	-	-	-	+	+	-	-
PatTB24	039	IgA2	IGHV3-15*01	IGHJ5*01	19	GSVEGS	lambda	IGLV7-43*01	IGLJ2*01	5	-	-	-	-		-	+	-
PatTB24	053	IgA2	IGHV3-33*01	IGHJ4*02	11	GARKSSGFLHDY	kappa	IGKV1D-33*01	IGKJ3*01	1	-	+	-			-		-
PatTB24	054	IgA1	IGHV1-46*01	IGHJ4*02	29	TIFDFWSGYSFDS	lambda	IGLV9-49*01	IGLJ2*01	12	+	+	-	+		+	+	-

TB patient	Nr	Isotype Heavy Chain	VH	JH	SHM	CDR3	Isotype Light Chain	VL	JL	SHM	MTB lysate	MTB bacteria	Cross-reactive	MTB Cell Membrane	ManLAM	BCG bacteria (FACS)	Esat-6	Ag85B
PatTB24	055	IgA2	IGHV1-8*01	IGHJ5*02	21	VSWLTSSHNWFD	kappa	IGKV1-39*01	IGKJ5*01	22	-	-	-	-	-	-	-	-
PatTB24	066	IgA1	IGHV3-9*01	IGHJ3*02	15	DLGYYDSGSYAFDI	kappa	IGKV3-20*01	IGKJ1*01	4	-	-	-	-	-	-	-	-
PatTB24	067	IgA1	IGHV3-30*19	ND	17	DGNNNNYEFYYR	lambda	IGLV3-21*02	IGLJ1*01	5	-	-	-	-	-	-	-	-
PatTB24	071	IgA2	IGHV3-15*01	IGHJ4*02	11	PSAGRTVTLDY	kappa	IGKV2-28*01	IGKJ2*01	3	-	-	-	-	-	-	-	-
PatTB24	073	IgA1	IGHV3-23*04	IGHJ4*02	26	VNWIRDRDS	kappa	IGKV1-5*03	IGKJ1*01	10	+	-	-	+	-	-	-	-
PatTB24	077	IgG1	IGHV4-34*01	IGHJ6*02	4	ARVTLYPGVRGAYHYGMDV	kappa	IGKV1-17*01	IGKJ1*01	3	-	-	+	-	-	-	+	+
PatTB24	102	IgA2	IGHV4-4*07	IGHJ4*02	12	NWNWGFDS	lambda	IGLV2-8*01	IGLJ1*01	8	-	-	-	-	-	-	-	-
PatTB24	107	IgG4	IGHV3-33*01	IGHJ6*02	8	DGIYDFWSGYYPNNGMDV	lambda	IGLV1-40*01	IGLJ2*01	3	-	+	-	-	-	-	-	-
PatTB24	115	IgA2	IGHV3-23*04	IGHJ3*01	24	REITVTFWTFDV	lambda	IGLV2-14*01	IGLJ1*01	6	-	-	-	-	-	-	-	-
PatTB24	133	IgA1	IGHV3-11*01	IGHJ4*02	21	DIKSPGDFLYFDY	lambda	IGLV1-51*02	IGLJ3*02	4	-	-	-	-	-	-	-	-
PatTB24	159	IgG2	IGHV1-2*02	IGHJ4*02	29	DTYGGDSFDY	lambda	IGLV2-11*01	IGLJ1*01	13	-	-	-	-	-	-	-	-
PatTB24	170	IgA1	IGHV3-72*01	IGHJ5*02	24	SDHYDTNGP	kappa	IGKV1-16*02	IGKJ4*01	7	+	-	-	-	-	-	-	-
PatTB24	176	IgA2	IGHV4-39*01	IGHJ4*02	21	SRARAPCDY	kappa	IGKV3-20*01	IGKJ2*01	14	+	-	-	+	-	-	-	-
PatTB24	185	IgA2	IGHV4-39*01	IGHJ6*02	13	HPWNLFDFTGYSGMDV	lambda	IGLV1-47*01	IGLJ2*01	7	-	+	-	-	-	+	-	-
PatTB24	196	IgG1	IGHV3-30*10	IGHJ4*02	32	EEWVVPNYFDY	kappa	IGKV1-39*01	IGKJ2*02	19	+	-	-	+	-	-	-	-
PatTB24	204	IgA2	IGHV3-64*05	IGHJ4*02	19	DGGAYNFPY	lambda	IGLV7-43*01	IGLJ3*02	11	-	+	-	-	-	-	-	-
PatTB24	210	IgA2	IGHV3-53*01	IGHJ4*02	32	VKSLAGPYFES	kappa	IGKV3-11*01	IGKJ1*01	11	+	+	-	+	-	-	-	-
PatTB24	213	IgA1	IGHV3-72*01	IGHJ3*02	20	GYSGVSIYAADI	kappa	IGKV3-20*01	IGKJ1*01	12	-	-	-	-	-	-	-	-
PatTB24	215	IgA2	IGHV3-64*05	IGHJ4*02	22	WYGDYTY	kappa	IGKV3-20*01	IGKJ4*01	8	-	-	-	-	-	-	-	-
PatTB24	218	IgA1	IGHV1-3*01	IGHJ4*02	19	GGNYHSSGYCLDY	lambda	IGLV3-25*02	IGLJ2*01	10	+	+	-	+	-	-	-	-
PatTB24	223	IgA1	IGHV3-43*01	IGHJ5*02	30	EAEQWLFNP	kappa	IGKV3-15*01	IGKJ1*01	5	+	-	+	+	-	+	+	+
PatTB24	236	IgA2	IGHV1-58*01	IGHJ6*02	14	PFSTPPPWNFGLDV	lambda	IGLV1-47*01	IGLJ3*02	10	-	-	-	-	-	-	-	-
PatTB24	245	IgG1	IGHV3-9*01	IGHJ4*02	6	ALAQRQYLVLDY	lambda	IGLV1-47*01	IGLJ1*01	3	-	-	-	-	-	-	-	-
PatTB24	260	IgG2	IGHV4-59*08	IGHJ4*02	4	LGDYSDY	kappa	IGKV3-11*01	IGKJ2*02	1	-	-	-	-	-	-	-	-
PatTB24	272	IgA2	IGHV4-59*01	IGHJ4*02	25	APVDHYDSSGNHYGGDS	kappa	IGKV3-20*01	IGKJ1*01	17	-	-	-	-	-	-	-	-
PatTB24	275	IgG3	IGHV1-46*03	IGHJ6*02	24	PGGTYGMD	kappa	IGKV1-39*01	IGKJ2*01	15	-	-	-	-	-	-	-	-
PatTB24	286	IgA2	IGHV3-23*04	IGHJ4*02	17	DRGDFWRGYCFDS	kappa	IGKV1-5*03	IGKJ1*01	6	+	-	-	+	-	-	-	-
PatTB24	337	IgA1	IGHV3-23*04	IGHJ4*02	18	RGTQYGSSRPFDY	kappa	IGKV1-39*01	IGKJ4*01	9	+	-	-	-	-	-	-	-

SHM, somatic hypermutations; VH, variable segment heavy chain; JH, joining segment heavy chain; VL, variable segment light chain; JL, joining segment light chain; ND, not determined; -, non-reactive; + reactive

**Appendix Table S3:** Ig gene features and antibody reactivity of all expressed HBHA-reactive memory B cells from TB patients and HCWs.

Donor	Antibody Name	VH	JH	CDR3	SHM	isotype	VL	JL	CDR3	SHM	Reactivity to HBHA	Cross-reactive	Neutralization	Enhancement
HCW001	HD001HBMem095	IGHV4-31*03	IGHJ4*02	AGSSTS YGRFDY	6	IgHM	IGKV1-12*02	IGKJ3*01	QQANSFPLFT	9	+	-	+	+
HCW001	HD001HBMem122	IGHV5-51*01	IGHJ5*02	YSGPSLYSNWFDP	12	IgHA1	IGLV1-44*01	IGLJ2*01	AAWDDSLNGPI	22	-	-	-	-
HCW001	HD001HBMem164	IGHV4-30-2*01	IGHJ4*02	GPYGS GTVLSLEY	7	IgHA1	IGLV2-8*01	IGLJ2*01	SSYAGSNNLVV	2	-	-	-	-
HCW001	HD001HBMem216	IGHV3-23*01	IGHJ2*01	AKDPSPRRRWQLRHLGWYFDL	19	IgHA1	IGKV2D-29*02	IGKJ1*01	MQSIEFLT	12	+	+	-	-
HCW001	HD001HBMem238	IGHV3-74*03	IGHJ3*02	GGIGAFDF	15	IgHA1	IGLV2-8*02	IGLJ2*01	SSYAGSNNFV	7	-	-	-	-
HCW001	HD001HBMem270	IGHV3-30*04	IGHJ4*02	GPRYS SSGWYSNYFDY	20	IgHG2	IGLV2-23*02	IGLJ2*01	CSYAGNSVLL	10	-	-	-	-
HCW001	HD001HBMem351	IGHV3-23*01	IGHJ3*02	AKPRMITMVRGDAFDI	10	IgHA1	IGKV1-27*01	IGKJ1*01	QKYNSAPHT	9	+	+	-	-
HCW001	HD001HBMem352	IGHV3-23*04	IGHJ5*02	AKGGDSGTYYFDW	13	IgHA1	IGKV1-5*03	IGKJ1*01	QQYNSYYRT	2	-	-	-	-
HCW001	HD001HBMem773	IGHV1-18*01	IGHJ6*03	VRAPRPDY YFYMDV	36	IgHA1	IGLV1-47*01	IGLJ2*01	AGWDDILKCPV	23	+	+	+	-
HCW001	HD001HBMem785	IGHV3-23*01	IGHJ5*01	AKMEVNGDYEYWFDS	19	IgHG2	IGKV4-1*01	IGKJ1*01	QQYYKSWT	9	-	-	-	-
HCW001	HD001HBMem797	IGHV3-74*03	IGHJ6*03	AKPAVASAYGRPLHYHMDV	18	IgHA1	IGKV4-1*01	IGKJ5*01	QQCYSTPPT	10	-	-	-	-
HCW001	HD001HBMem804	IGHV2-5*02	IGHJ5*02	GYSKQGNSYSGSGSYHS	14	ND	IGKV3-11*01	IGKJ1*01	QQRSSWSE S	12	+	-	+	-
HCW001	HD001HBMem823	IGHV3-74*03	IGHJ4*02	VRDRDWIVGDY	19	ND	IGLV1-47*01	IGLJ3*02	ATWDDSLGGWV	9	-	-	-	-
HCW001	HD001HBMem825	IGHV5-10-1*03	IGHJ4*02	LLRGYYDSNAYPYFDN	14	ND	IGKV4-1*01	IGKJ4*01	QLYYNPPLT	4	-	-	-	-
HCW001	HD001HBMem830	IGHV4-59*01	IGHJ6*02	AKFEGLGEYYYGMDV	13	IgHA2	IGLV8-61*01	IGLJ3*02	VLYMGSGIWV	3	-	-	-	-
HCW001	HD001HBMem835	IGHV1-2*02	IGHJ4*02	TRAHN NAYYFDS	9	IgHA1	IGLV2-8*02	IGLJ2*01	ATWDDSLGGWV	2	-	-	-	-
HCW001	HD001HBMem838	IGHV4-39*01	IGHJ5*02	VHFYPMVRGAMPDWFDP	17	IgHA1	IGKV3-15*01	IGKJ2*01	QQYNSWPPMYS	10	-	-	-	-
HCW001	HD001HBMem841	IGHV5-51*01	IGHJ4*02	HLYSGSGSESDY	0	ND	IGKV1-39*01	IGKJ2*02	QQSYSTLT	2	-	-	-	-
HCW001	HD001HBMem847	IGHV3-7*03	IGHJ4*02	DRAVSRWSEVPDY	9	ND	IGKV1-5*03	IGKJ1*01	QQYSTYSRT	4	-	-	-	-
HCW001	HD001HBMem848	IGHV1-18*04	IGHJ4*02	DYSGSGRGDY	9	IgHA1	IGKV3-20*01	IGKJ3*01	QQYGN SPPFT	5	-	-	-	-
HCW001	HD001HBMem854	IGHV3-21*01	IGHJ4*02	VRLVSRAAGFDY	17	IgHA1	IGKV1-27*01	IGKJ2*02	QKYNSAPYT	7	-	-	-	-
HCW001	HD001HBMem857	IGHV3-47*01	IGHJ4*02	AKWIGGN YFGVDY	11	IGHM	IGLV7-43*01	IGLJ3*02	LLYYGGSEPWL	6	+	-	+	+
HCW001	HD001HBMem862	IGHV3-7*02	IGHJ4*02	SGTPTS GYGGVVYAQKFDY	17	IgHA2	IGKV1-39*01	IGKJ3*01	QQIYTTRFT	17	-	-	-	-
HCW001	HD001HBMem864	IGHV3-15*01	IGHJ6*02	TTPFRYYYSGKNYYYGMDV	2	IgHG1	IGKV3-11*01	IGKJ4*01	QQRSNWPPLT	1	+	-	-	-
HCW001	HD001HBMem867	IGHV3-53*01	IGHJ4*02	AHYDSSGWFD S	4	IgHA1	IGKV1-39*01	IGKJ4*01	QQSYSTLTVLT	2	-	-	-	-
HCW001	HD001HBMem871	IGHV2-5*01	IGHJ3*02	AHSGDILTGYYNVAPFDI	4	IgHA2	IGLV1-44*01	IGLJ2*01	AAWDDSLNGP VV	6	-	-	-	-
HCW001	HD001HBMem872	IGHV3-53*01	IGHJ4*02	AETPSGSYYGFDY	18	IgHA1	IGKV1-39*01	IGKJ4*01	QQSYR TPLT	7	-	-	-	-
HCW001	HD001HBMem873	IGHV3-23*01	IGHJ3*01	AKDIDDSYGHRRD GWIDAFDV	16	IgHA1	IGKV3-15*01	IGKJ5*01	QQYNDWPPIT	7	-	-	-	-
HCW001	HD001HBMem880	IGHV1-2*02	IGHJ4*02	AVDHGRNSRGFDY	13	ND	IGLV8-61*01	IGLJ3*02	VLYMGSGIWV	4	-	-	-	-
HCW001	HD001HBMem885	IGHV4-59*01	IGHJ4*02	VIVGGTHDY	35	IgHA1	IGKV1-17*01	IGKJ3*01	LHHNSDFFT	12	-	-	-	-
HCW001	HD001HBMem887	IGHV4-4*02	IGHJ3*02	DHSYGGDSVWAFDL	24	ND	IGKV3-20*01	IGKJ1*01	QHYHDSSWT	14	+	-	+	+
HCW001	HD001HBMem889	IGHV5-10-1*03	IGHJ2*01	QRTGGTQY YWYFDL	12	IgHA1	IGLV2-23*02	IGLJ3*02	CSYAGSTTLV V	3	-	-	-	-
HCW001	HD001HBMem899	IGHV3-23*01	IGHJ4*02	ATVLLFRGPGFLFDY	22	IgHA1	IGKV1-13*02	IGKJ4*01	QHFNGYPPT	7	-	-	-	-
HCW001	HD001HBMem914	IGHV1-69*01	IGHJ2*01	SLPKTTVTY YWYFDL	3	ND	IGKV3-20*01	IGKJ2*02	QQYGSSPQT	0	-	-	-	-

Donor	Antibody Name	VH	JH	CDR3	SHM	Isotype	VL	JL	CDR3	SHM	Reactivity to HBHA	Cross-reactive	Neutralization	Enhancement
HCW001	HD001HBMem915	IGHV4-61*01	IGHJ4*02	GPGNYDLLTGYYPAELDY	10	IgHA1	IGLV2-8*02	IGLJ2*01	SSYAGSKNVV	3	-	-		
HCW001	HD001HBMem919	IGHV1-46*01	IGHJ6*02	SMNSGSYYFRYYYYGMDV	3	IgHA1	IGLV1-44*01	IGLJ2*01	AAWDDSLNGHV	0	+	+		
HCW001	HD001HBMem926	IGHV4-30-4*01	IGHJ4*02	AKAVTIFPVFYFDY	0	IgHA1	IGLV1-44*01	IGLJ2*01	AAWDDSLNGHV	1	-	-		
HCW002	T2PBMHA004	IGHV4-59*01	IGHJ1*01	DGDTSVTYFHH	19	IGHM	IGKV3-20*01	IGKJ2*03	QQYGNSPPY	5	-	-		
HCW002	T2PBMHA007	IGHV2-5*02	IGHJ4*02	RLGGYGWNAHFDY	12	IGHM	IGLV2-8*01	IGLJ1*01	SSNAGGSTYV	1	-	-		
HCW002	T2PBMHA014	IGHV3-48*03	IGHJ4*02	VLGLEY	9	IGHM	IGKV3-11*01	IGKJ2*02	QQRSNWPRT	14	-	-		
HCW002	T2PBMHA019	IGHV2-5*06	IGHJ4*02	TFYYDGRAEYARYSWFDP	11	ND	IGKV3-20*01	IGKJ2*01	QQYGDSPNT	5	+	-		
HCW002	T2PBMHA036	IGHV2-5*02	IGHJ4*02	RQFLNADWNFGYFDY	13	ND	IGLV2-14*01	IGLJ3*02	SSYTGSSV	7	+	-		
HCW002	T2PBMHA056	IGHV4-38-2*02	IGHJ6*03	DTPRAHTSTGGLVASRNWFDP	15	IGHM	IGLV1-51*01	IGLJ2*01	GTWDSSLSTGV	5	-	-		
HCW002	T2PBMHA059	IGHV4-39*07	IGHJ5*02	TRAPVVVVTVYYYYMDV	8	IGHA2	IGLV7-46*01	IGLJ1*01	LLSYSGAGV	4	-	-		
HCW002	T2PBMHA060	IGHV2-5*02	IGHJ5*02	HRGPTGVDR	21	IGHM	IGKV3-20*01	IGKJ5*01	QQYGRSPIT	19	-	-		
HCW002	T2PBMHA061	IGHV1-46*01	IGHJ4*02	RLMYSGNWDVGFDP	28	IGHA2	IGLV7-43*01	IGLJ3*02	LLFSGGVVW	14	-	-		
HCW002	T2PBMHA065	IGHV2-5*02	IGHJ4*02	YDRSSWYFRDY	13	IGHM	IGLV2-14*01	IGLJ1*01	SSYTSSTV	4	-	-		
HCW002	T2PBMHA072	IGHV3-7*03	IGHJ4*03	GRRDGYSYRGDDAFHI	13	ND	IGKV2-30*01	IGKJ2*01	MLTHWPYT	6	-	-		
HCW002	T2PBMHA082	IGHV2-5*02	IGHJ4*02	DRGEWLDAFDP	17	IGHM	IGLV2-8*01	IGLJ1*01	SSYAGSNTYV	2	-	-		
HCW002	T2PBMHA109	IGHV4-31*03	IGHJ3*01	GEGFPGMGAFDV	20	IGHA2	IGKV1-13*02	IGKJ2*01	QHFNSFLYT	22	-	-		
HCW002	T2PBMHA116	IGHV1-46*01	IGHJ4*02	DLPGGYQGNLFDY	10	IGHA2	IGKV3-20*01	IGKJ5*01	QQYGSSPIT	6	-	-		
HCW002	T2PBMHA128	IGHV2-5*02	IGHJ4*02	DRGGDYDSSSYFDS	13	IGHM	IGKV1-12*01	IGKJ5*01	QQAYRFPT	9	+	-	+	
HCW002	T2PBMHA134	IGHV3-21*01	IGHJ6*04	PGIGVFMDV	20	IGHA1	IGKV3-20*01	IGKJ2*01	LLYINNSHRYT	11	-	-		
HCW002	T2PBMHA138	IGHV2-5*02	IGHJ4*02	PGIGVFMDV	9	IGHM	IGKV1-5*03	IGKJ1*01	QQCYSYST	11	-	-		
HCW002	T2PBMHA139	IGHV4-39*07	IGHJ4*02	RLVGGGSNWDANFDH	17	IGHA1	IGKV1-16*01	IGKJ1*01	QQYYSYPR	7	-	-		
HCW002	T2PBMHA142	IGHV2-5*02	IGHJ4*02	GMRYHGGD	14	IGHM	IGLV2-8*01	IGLJ1*01	SSYAGSNTYV	2	-	-		
HCW002	T2PBMHA162	IGHV2-5*02	IGHJ5*02	RLESGSPGWWWYFDH	6	ND	IGKV3-20*01	IGKJ5*01	QQYGSSPST	12	-	-		
HCW002	T2PBMHA164	IGHV1-3*01	IGHJ4*03	RLTYSGNWDVGFDP	25	IGHM	IGKV4-1*01	IGKJ4*01	QQYYSAPLT	13	-	-		
HCW002	T2PBMHA167	IGHV5-51*01	IGHJ4*02	PRNAAIPQGWYFDC	12	IGHM	IGKV1-5*03	IGKJ2*02	QQYNTYSQT	12	-	-		
HCW002	T2PBMHA175	IGHV3-74*03	IGHJ3*02	PRNAAIPQGWYFDC	19	IGHA2	IGKV1-39*01	IGKJ3*01	QQTYGTPFT	9	+	-		
HCW002	T2PBMHA181	IGHV1-18*04	IGHJ6*02	SGGSGPILDY	34	IGHA1	IGKV3-20*01	IGKJ3*01	QQYGSSTFT	15	-	-		
HCW002	T2PBMHA184	IGHV4-34*01	IGHJ4*02	ALIDEGHGLGY	28	IGHA2	IGKV1-5*01	IGKJ2*01	HQYSDYPYT	16	-	-		
TB029	TB29PBMHA004	IGHV3-7*03	IGHJ3*02	GDYYDSSGYFHDAFDI	10	IGHM	IGKV3-15*01	IGKJ1*01	QQYNNWPPWT	11	-	-		
TB029	TB29PBMHA006	IGHV1-3*01	IGHJ6*02	AIVSTINDYYYGMDV	16	IGHM	IGKV1-27*01	IGKJ3*01	QKYNAPLT	6	-	-		
TB029	TB29PBMHA009	IGHV3-33*01	IGHJ4*02	VKPGVEYFFDY	4	IGHM	IGKV1D-33*01	IGKJ4*01	QQYDNLPLT	0	-	-		
TB029	TB29PBMHA012	IGHV3-21*01	IGHJ4*02	NFYGYDDNSGSTRKRFYFHY	20	IGHA2	IGLV1-51*01	IGLJ2*01	ATWDGSLSVL	7	-	-		
TB029	TB29PBMHA012	IGHV3-21*01	IGHJ4*02	NFYGYDDNSGSTRKRFYFHY	20	IGHA2	IGLV1-51*01	IGLJ2*01	ATWDGSLSVL	7	-	-		
TB029	TB29PBMHA015	IGHV3-33*01	IGHJ4*02	DREGGYSYSGFFDY	1	IGHM	IGKV1-5*03	IGKJ1*01	QQYNSYPWT	3	-	-		
TB029	TB29PBMHA023	IGHV3-23*01	IGHJ4*02	DGRNYGRFDY	10	IGHA2	IGKV3-11*01	IGKJ3*01	QQWSNWPLT	6	+	+	-	

Donor	Antibody Name	VH	JH	CDR3	SHM	Isotype	VL	JL	CDR3	SHM	Reactivity to HBHA	Cross-reactive	Neutralization	Enhancement
TB029	TB29PBMHA025	IGHV3-74*03	IGHJ4*02	STTGIFDY	24	IGHA2	IGKV2D-40*01	IGKJ1*01	MQRRESPST	11	-	-		
TB029	TB29PBMHA026	IGHV1-69*06	IGHJ4*02	QMGATGFDY	23	IGHA2	IGKV2-28*01	IGKJ4*01	MEALQTPH	9	-	-		
TB029	TB29PBMHA036	IGHV1-46*02	IGHJ5*02	DPRPYQRFNYFDP	36	IGHA1	IGLV1-44*01	IGLJ3*02	ASWDDSLRGLV	9	-	-		
TB029	TB29PBMHA038	IGHV3-48*03	IGHJ4*02	TGILTGLDY	28	IGHA2	IGLV1-44*01	IGLJ2*01	AAWDDSLNGRL	7	-	-		
TB029	TB29PBMHA046	IGHV1-46*01	IGHJ4*02	RSGTYWGFYD	27	IGHA1	IGKV3-20*01	IGKJ1*01	QQYASSTWT	11	+	+		
TB029	TB29PBMHA053	IGHV3-30*18	IGHJ5*02	DPRARAGLYCSSTSCYSGTQNNWFDP	0	IGHM	IGKV1-39*01	IGKJ2*01	QQSYSTPYT	0	-	-		
TB029	TB29PBMHA060	IGHV4-4*02	IGHJ3*02	DSPVRAIECSGGPCDVALDI	16	IGHA1	IGKV3-11*01	IGKJ1*01	QQRNWPRPT	7	-	-		
TB029	TB29PBMHA062	IGHV3-23*01	IGHJ4*02	ASKGCSGGSCYSVQNYFDY	7	IGHA2	IGLV2-14*01	IGLJ3*02	SSYTNSVTLV	7	-	-		
TB029	TB29PBMHA064	IGHV3-53*01	IGHJ4*02	GSPNSNEHFYLN	32	IGHA1	IGKV1-39*01	IGKJ1*01	QQTITPWT	20	-	-		
TB029	TB29PBMHA066	IGHV3-48*03	IGHJ4*02	EWKDDSY	17	IGHA2	IGKV3-20*01	IGKJ4*02	QHYGTSPRLT	5	-	-		
TB029	TB29PBMHA071	IGHV3-30-3*01	IGHJ6*02	DHPLYSSSSYYGMDV	21	IGHA2	IGKV1-16*01	IGKJ4*01	PWTYYGH	21	-	-		
TB029	TB29PBMHA088	IGHV4-31*03	IGHJ3*02	EVINAADSDGFDM	17	IGHA1	IGKV3-15*01	IGKJ4*01	QHYTEQPLT	5	-	-		
TB029	TB29PBMHA090	IGHV4-34*01	IGHJ6*01	AYCGGDCFMRDYYYYYGVDV	42	IGHA1	IGLV3-9*01	IGLJ2*01	QVWDMSVGM	19	-	-		
TB029	TB29PBMHA092	IGHV4-59*02	IGHJ4*02	GRDAYKTGY	25	IGHM	IGKV4-1*01	IGKJ1*01	QQYANTPWT	10	-	-		
TB029	TB29PBMHA098	IGHV4-4*02	IGHJ4*02	AYCGGDCYLDS	18	ND	IGKV2-28*01	IGKJ5*01	MQLTQTTWA	6	-	-		
TB029	TB29PBMHA102	IGHV3-30*18	IGHJ3*02	GHFYDSREYSFREQRAPDI	5	IGHA1	IGKV4-1*01	IGKJ1*01	QYHTTPT	4	-	-		
TB029	TB29PBMHA103	IGHV3-23*01	IGHJ1*01	SGCSSTSCLAEIFQH	4	IGHM	IGKV1D-33*01	IGKJ4*01	QQYDNLPT	0	-	-		
TB029	TB29PBMHA120	IGHV3-23*01	IGHJ4*02	DPNWDDGH	35	IGHA2	IGKV2-30*01	IGKJ2*02	MQASYWPLT	20	-	-		
TB029	TB29PBMHA122	IGHV3-48*03	IGHJ3*02	DRDGGKSSIHAFDI	15	IGHM	IGKV1-27*01	IGKJ3*01	QKYDSAPRT	2	+	+		
TB029	TB29PBMHA135	IGHV3-7*01	IGHJ4*02	YNDGWWSGHY	19	IGHA2	IGKV2-30*01	IGKJ1*01	MQASHWPPT	3	-	-		
TB029	TB29PBMHA136	IGHV1-3*01	IGHJ6*02	RQVLFYGLDV	32	IGHA2	IGLV3-25*02	IGLJ3*02	QSADNTASLWV	20	-	-		
TB029	TB29PBMHA139	IGHV1-58*01	IGHJ5*02	SGILTGSSNSDS	34	IGHA2	IGKV3-20*01	IGKJ2*01	LQYHTSPYT	16	-	-		
TB029	TB29PBMHA147	IGHV2-5*02	IGHJ4*02	RVHLGFWSSAYFDY	2	IGHM	IGKV4-1*01	IGKJ1*01	QQYTTTPT	4	-	-		
TB029	TB29PBMHA163	IGHV3-20*01	IGHJ4*02	LGPRTYDILTGPFYD	24	IGHG3	IGKV1D-33*01	IGKJ4*01	QQFDNLPLT	17	+	-	+	
TB029	TB29PBMHA175	IGHV3-7*03	IGHJ4*02	DVG YFDWSDY	7	IGHM	IGLV4-69*02	IGLJ3*02	QTWGTGIRV	7	-	-		
TB029	TB29PBMHA178	IGHV3-7*01	IGHJ5*02	SAGWVSDS	23	IGHA2	IGKV3-20*01	IGKJ4*01	HQSATSPLT	17	-	-		
TB030	TB030HBMem002	IGHV3-66*01	IGHJ4*02	SGGGYYDSSGYYPFDY	7	IgHM	IGKV2-29*02	IGKJ1*01	MQGI YSWT	3	-	-		
TB030	TB030HBMem008	IGHV3-74*01	IGHJ5*02	DPHGSGSA	3	IgHM	IGLV2-14*01	IGLJ3*02	SSYTSSSTWM	3	-	-		
TB030	TB030HBMem012	IGHV3-23*01	IGHJ4*02	AKGSMAPYYFDY	21	IgHM	IGKV3-20*01	IGKJ1*01	QQYGSSRT	5	-	-		
TB030	TB030HBMem025	IGHV4-34*01	IGHJ6*02	RDPAVFRGMDV	0	IgHM	IGLV1-44*01	IGLJ2*01	AAWDDSLNGPI	28	-	-		
TB030	TB030HBMem043	IGHV3-30-3*01	IGHJ4*02	DKTTYDINSPIGY	12	IgHM	IGLV8-61*01	IGLJ3*02	VLYMGSGIWW	6	-	-		
TB030	TB030HBMem070	IGHV3-9*01	IGHJ1*01	AKDRYSPRYFQH	0	ND	IGLV8-61*01	IGLJ3*02	VLYMGSGIWW	11	-	-		
TB030	TB030HBMem077	IGHV4-39*01	IGHJ6*02	QRHNYEVYYGMDV	2	IgHM	IGKV1-39*01	IGKJ4*01	QQSYSTSLT	0	-	-		
TB030	TB030HBMem094	IGHV3-53*04	IGHJ6*02	YGILSYGMDV	2	IgHM	IGLV2-8*01	IGLJ2*01	SSYAGSNNFV	2	-	-		
TB030	TB030HBMem168	IGHV3-30*18	IGHJ6*02	DFFSAAGTFHYFYGMDV	5	IgHM	IGLV1-47*02	IGLJ3*02	AAWDDSLSGVV	5	-	-		



Donor	Antibody Name	VH	JH	CDR3	SHM	Isotype	VL	JL	CDR3	SHM	Reactivity to HBHA	Cross-reactive	Neutralization	Enhancement
TB030	TB030HBMem244	IGHV4-4*02	IGHJ4*02	GAVPRKKYFDY	14	IgHA1	IGKV1-9*01	IGKJ3*01	QQVYNYPFT	7	-	-		
TB030	TB030HBMem391	IGHV3-20*01	IGHJ3*02	VRGRDYNLLHVFDI	7	ND	IGKV3-20*01	IGKJ1*01	QQSGSSPAT	4	-	-		
TB030	TB030HBMem410	IGHV3-9*01	IGHJ4*02	AKDYCSSSSCYFDY	5	ND	IGKV3-20*01	IGKJ5*01	QQYGNPPIIT	5	-	-		
TB030	TB030HBMem418	IGHV3-23*01	IGHJ4*02	VKEEPTVNAGYFDY	24	IgHA1	IGKV1D-12*01	IGKJ4*01	QQANSFPLT		-	-		
TB030	TB030HBMem421	IGHV3-74*01	IGHJ5*02	GIGDDH	8	IgHG2	IGLV4-69*01	IGLJ2*01	QTWGSGIQV	10	-	-		
TB030	TB030HBMem452	IGHV4-59*01	IGHJ4*02	GKSSSTLSYFDY	14	IgHG1	IGKV1-5*03	IGKJ1*01	QQYNDYPGT		-	-		
TB030	TB030HBMem453	IGHV5-51*01	IGHJ3*02	PMETHMLSAFDM	7	ND	IGLV8-61*01	IGLJ3*02	VLYMGSGIWW	3	-	-		
TB030	TB030HBMem462	IGHV3-30-3*01	IGHJ6*02	VVRGYSYGFAYYYGMDV	4	ND	IGLV2-14*040	IGLJ2*01	SSYTSSSTLVV	0	-	-		-
TB030	TB030HBMem466	IGHV4-39*01	IGHJ4*02	RFLYDSGSGRFDSD	18	ND	IGLV8-61*01	IGLJ3*02	VLYMGSGIWW	1	-	-		
TB030	TB030HBMem470	IGHV1-18*01	IGHJ3*02	GPYYEEAFGDADFID	0	ND	IGKV2-30*02	IGKJ4*01	MQGTHWPPLT		-	-		
TB030	TB030HBMem471	IGHV1-2*04	IGHJ4*02	QAGSGPSFDY	14	ND	IGLV2-23*03	IGLJ2*01	CSYVGSSTSVV	4	-	-		
TB035	TB035HBMem015	IGHV3-23*01	IGHJ4*02	AKDELEYQHSYFDY	0	IgHM	IGKV1-5*03	IGKJ5*01	QQYNSYLIT	0	-	-		
TB035	TB035HBMem017	IGHV4-59*01	IGHJ6*02	SRDHWKYVKDWAYFGLDV	35	IgHM	IGKV3-20*01	IGKJ2*01	QQYGDSQYT	27	-	-		
TB035	TB035HBMem020	IGHV2-5*02	IGHJ3*02	AHIMITFGGVMRTDAFDI	26	ND	IGLV2-11*01	IGLJ3*02	CSYAGSYSWV	8	+	-	+	-
TB035	TB035HBMem022	IGHV3-64*02	IGHJ4*02	AYYYDSRGGHYLDS	11	IgHM	IGKV1-39*01	IGKJ4*02	QQTYTSS	13	-	-		
TB035	TB035HBMem042	IGHV3-74*01	IGHJ4*02	DRPHRRLLDS	27	IgHG2	IGKV1-33*01	IGKJ4*01	LHHDNFPLT	12	+	-		-
TB035	TB035HBMem071	IGHV4-39*01	IGHJ6*02	AEGGYSGNVHQHYYYGVVDV	2	IgHM	IGKV3-11*01	IGKJ4*01	QQRNNWPLT	1	-	-		
TB035	TB035HBMem080	IGHV3-23*01	IGHJ6*02	VKTGGDCCWQSEYAMDV	20	IgHA1	IGKV4-1*01	IGKJ5*01	QQYYTTPIT	11	+	-		+
TB035	TB035HBMem094	IGHV4-59*01	IGHJ5*02	DVEGDGYSQFDR	22	IgHM	IGKV3-20*01	IGKJ2*01	QQYGSSSYT	11	-	-		
TB035	TB035HBMem125	IGHV3-15*01	IGHJ4*02	NTVYTPVDQAFDY	16	IgHG2	IGKV3-15*01	IGKJ2*01	QQYNNWPPYT	6	-	-		
TB035	TB035HBMem155	IGHV3-74*03	IGHJ6*02	VRDRIEVESVRPIIYYGMDV	25	IgHG2	IGLV3-9*01	IGLJ2*01	QVWDSIVI	9	-	-		
TB035	TB035HBMem159	IGHV2-5*02	IGHJ4*02	AHRAVRITWSRPFYFDY	3	ND	IGKV1-33*01	IGKJ5*01	QQSNNLPPT	5	-	-		
TB035	TB035HBMem183	IGHV4-59*01	IGHJ4*02	GDVWGTD	6	ND	IGKV4-1*01	IGKJ5*01	QQYYSTPTIT	5	-	-		
TB035	TB035HBMem247	IGHV4-59*01	IGHJ6*02	GGANYDAMDV	16	IgHG1	IGKV1-5*03	IGKJ1*01	QQYNTYRT	4	-	-		
TB035	TB035HBMem248	IGHV3-30*18	IGHJ6*02	AKEKEWLGRHYYYGMDV	20	IgHG1	IGLV2-14*03	IGLJ2*01	SSYTSSSALA	13	+	+		
TB035	TB035HBMem255	IGHV3-23*04	IGHJ6*02	GYDFLSGQPYAMEV	15	IgHA1	IGLV2-11*03	IGLJ1*01	CSYAGKFSYV	10	-	-		
TB035	TB035HBMem424	IGHV3-30*03	IGHJ4*02	PDSDWYALALFGF	21	IgHG2	IGLV2-11*03	IGLJ3*02	CSYAGAFSTL	8	-	-		
TB035	TB035HBMem447	IGHV3-7*01	IGHJ6*02	DRRQLVLGGYYYGMDV	4	IgHA1	IGLV1-40*01	IGLJ2*01	QSHDLGLSGSVV	3	+	+		
TB035	TB035HBMem457	IGHV3-72*01	IGHJ4*02	DFSVVGAIDYFDS	20	IgHA2	IGLV3-1*01	IGLJ2*01	QAWERDVT	9	-	-		
TB035	TB035HBMem465	IGHV4-59*01	IGHJ6*02	SLRFFDWLSTHPDYHYYYGMGV	4	IgHA1	IGLV2-14*04	IGLJ2*01	SSYSSSTLVV	6	-	-		
TB035	TB035HBMem467	IGHV3-9*01	IGHJ4*02	AKGPSQRYFDWLSPFYFDY	7	ND	IGLV2-14*01	IGLJ2*01	SSYTSSSIHVV	2	-	-		
TB035	TB035HBMem469	IGHV3-49*03	IGHJ2*01	TRKLLGHLYWYFDL	12	IgHG1	IGKV1-12*01	IGKJ1*01	QQANSFPPT	12	+	+		-
TB035	TB035HBMem470	IGHV3-74*01	IGHJ5*02	DLGIDSSAS	4	ND	IGLV3-1*01	IGLJ2*01	QAWDSRMTV	0	-	-		
TB035	TB035HBMem516	IGHV3-72*01	IGHJ4*02	VRAPYSATYFDY	16	ND	IGKV1-39*01	IGKJ4*01	QQSYSIP	10	-	-		
TB035	TB035HBMem557	IGHV1-46*01	IGHJ6*02	AIWFAGQGSYISGSNVKDV	13	IgHG1	IGLV2-11*01	IGLJ2*01	CSYAGSYTWI	4	+	+		
TB035	TB035HBMem561	IGHV3-11*06	IGHJ5*02	VRGGVVVADTR	19	IgHA1	IGLV3-21*03	IGLJ2*01	QVWDTNTDLGV	11	-	-		
TB035	TB035HBMem578	IGHV3-30*18	IGHJ6*02	AKVFYTRSGSPGLFYGMDV	10	IgHG1	IGKV3-20*01	IGKJ2*01	QHYGSSPPYT	10	+	+		-
TB035	TB035HBMem584	IGHV4-39*01	IGHJ4*02	PGREDGNSIAIDY	2	IgHG2	IGLV1-40*01	IGLJ2*01	QSYDSSLSSVV	2	-	-		
TB035	TB035HBMem586	IGHV4-39*01	IGHJ5*01	SYDS	7	IgHA2	IGLV1-44*01	IGLJ1*01	AAWDDSLNGYV	2	-	-		
TB035	TB035HBMem608	IGHV3-64*02	IGHJ4*02	DRGLHFLED	12	ND	IGLV2-14*01	IGLJ2*01	SSRTSSSTLAGV	6	-	-		

SHM, somatic hypermutations; VH, variable segment heavy chain; JH, joining segment heavy chain; VL, variable segment light chain; JL, joining segment light chain; ND, not determined; -, non-reactive; + reactive

**Appendix Table S4.** Functional characterization of plasmablast antibodies.

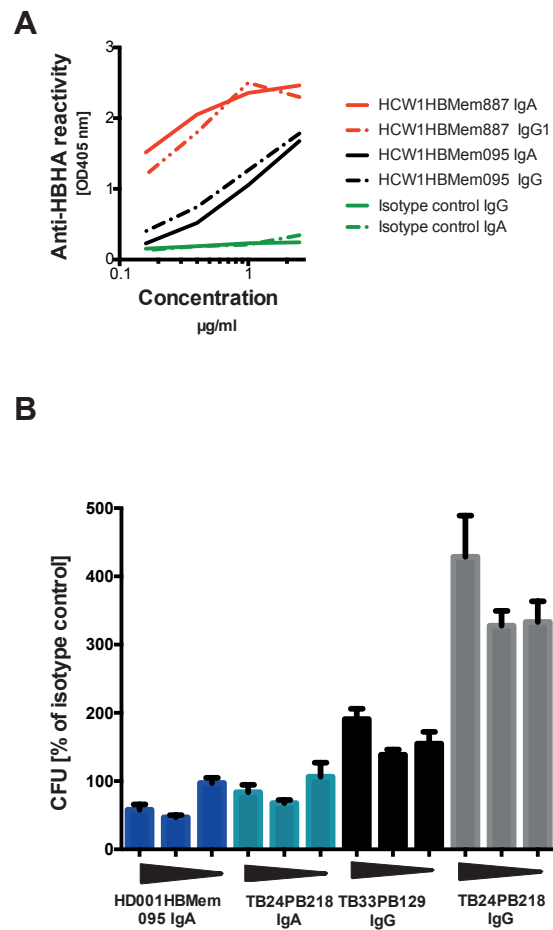
Isotype	Subclass	TB patient	Antibody Nr	VH				SHM	CDR3	Isotype Light Chain	VL			SHM	Mtb lysate	MTB bacteria	Cross-reactive	Cell Membrane	ManLAM	FACS BCG	Neutralization	Enhancement
				VH	JH	SHM	CDR3				VL	JL	SHM									
IgA	IgA1	Pat TB24	037	IGHV3-53*01	IGHJ4*02	39	RNFHY	lambda	IGLV7-46*01	IGLJ2*01	13	-	-	-	-	+	+	+	-			
IgA	IgA1	Pat TB24	054	IGHV1-46*01	IGHJ4*02	29	TIFDFWSGYSFDS	lambda	IGLV9-49*01	IGLJ2*01	12	+	+	-	+	ND	+	-	+			
IgA	IgA1	Pat TB24	073	IGHV3-23*04	IGHJ4*02	26	VNWIRDRDS	kappa	IGKV1-5*03	IGKJ1*01	10	+	-	-	+	-	-	-	-			
IgA	IgA1	Pat TB24	170	IGHV3-72*01	IGHJ5*02	24	SDHYDTNGP	kappa	IGKV1-16*02	IGKJ4*01	7	+	-	-	-	ND	-	ND	+			
IgA	IgA1	Pat TB24	218	IGHV1-3*01	IGHJ4*02	19	GGNYHHSSGYCLDY	lambda	IGLV3-25*02	IGLJ2*01	10	+	+	-	+	-	-	+	+			
IgA	IgA1	Pat TB24	337	IGHV3-23*04	IGHJ4*02	18	RGTQYGSSRPFDY	kappa	IGKV1-39*01	IGKJ4*01	9	+	-	-	ND	ND	-	-	ND			
IgA	IgA1	Pat TB33	189	IGHV3-23*01	IGHJ5*02	30	ICPSQNWNFDA	kappa	IGKV3-11*01	IGKJ5*01	8	+	-	-	ND	ND	-	+	ND			
IgA	IgA2	Pat TB 7	066	IGHV3-15*07	IGHJ6*03	2	DNMDV	lambda	IGLV4-69*01	IGLJ3*02	8	+	-	-	-	ND	-	+	ND			
IgA	IgA2	Pat TB24	039	IGHV3-15*01	IGHJ5*01	19	GSVEGS	lambda	IGLV7-43*01	IGLJ2*01	5	-	-	-	-	ND	-	+	ND			
IgA	IgA2	Pat TB24	176	IGHV4-39*01	IGHJ4*02	21	SRARAPCDY	kappa	IGKV3-20*01	IGKJ2*01	14	+	-	-	+	ND	-	ND	+			
IgA	IgA2	Pat TB24	185	IGHV4-39*01	IGHJ6*02	13	HPWNLFDFTGYYSGMDV	lambda	IGLV1-47*01	IGLJ2*01	7	-	+	-	ND	-	+	ND	-			
IgA	IgA2	Pat TB24	210	IGHV3-53*01	IGHJ4*02	32	VKSLAGPYFES	kappa	IGKV3-11*01	IGKJ1*01	11	+	+	-	+	-	-	-	+			
IgA	IgA2	Pat TB24	286	IGHV3-23*04	IGHJ4*02	17	DRGDFWRGYCFDS	kappa	IGKV1-5*03	IGKJ1*01	6	+	-	-	+	-	-	-	+			
IgA	IgA2	Pat TB33	059	IGHV4-39*07	IGHJ4*02	16	YAKYSSTSYGAFDY	lambda	IGLV2-11*01	IGLJ3*02	5	+	-	-	ND	ND	-	-	-			
IgA	IgA2	Pat TB33	129	IGHV4-39*07	IGHJ6*02	9	RGSGFNGMDV	kappa	IGKV3-20*01	IGKJ2*01	3	+	-	-	-	ND	-	+	+			
IgA	IgA2	Pat TB33	148	IGHV3-73*02	IGHJ4*02	22	RIPNVNDF	lambda	IGLV2-14*01	IGLJ3*02	13	+	+	+	ND	ND	ND	+	ND			
IgG	IgG1	Pat TB 7	017	IGHV1-69*01	IGHJ4*02	20	TAFGVVGLDFDY	lambda	IGLV7-46*01	IGLJ2*01	9	+	+	-	ND	ND	ND	ND	+			
IgG	IgG1	Pat TB 7	023	IGHV1-8*01	IGHJ4*02	20	VEWYRPFDF	kappa	IGKV3-20*01	IGKJ4*01	9	+	-	+	+	-	-	ND	+			
IgG	IgG1	Pat TB 7	031	IGHV3-15*07	IGHJ4*02	17	GFQGRGGWFRHITQY	kappa	IGKV1D-33*01	IGKJ3*01	8	+	+	+	ND	ND	+	ND	+			
IgG	IgG1	Pat TB 7	034	IGHV4-59*08	IGHJ4*02	24	RYGGYYFDH	kappa	IGKV1D-12*01	IGKJ2*01	9	+	-	-	+	ND	-	ND	-			
IgG	IgG1	Pat TB 7	067	IGHV3-21*01	IGHJ6*03	1	DNLPNRYMDV	lambda	IGLV1-51*02	IGLJ3*02	11	+	-	-	+	-	+	ND	+			
IgG	IgG1	Pat TB 7	079	IGHV3-30*01	IGHJ5*02	13	PHDIVITNPFDL	kappa	IGKV1D-16*01	IGKJ4*01	9	+	+	-	+	-	-	ND	-			
IgG	IgG1	Pat TB 7	196	IGHV4-34*01	IGHJ4*02	5	DVFPLRLYYYQSSGFYNY	kappa	IGKV3-20*01	IGKJ2*02	9	+	+	+	ND	-	+	ND	-			
IgG	IgG1	Pat TB 7	242	IGHV3-74*01	IGHJ4*02	8	SVGSGAWRHYFDY	lambda	IGLV1-40*01	IGLJ3*02	12	+	-	-	+	ND	-	ND	+			
IgG	IgG1	Pat TB 7	349	IGHV4-59*08	IGHJ4*02	21	LFYYDGSSYDPGIDY	lambda	IGLV7-43*01	IGLJ3*02	9	+	-	-	-	-	-	ND	+			
IgG	IgG1	Pat TB24	023	IGHV3-7*01	IGHJ4*02	16	DPIRSDGHNYDY	kappa	IGKV1-12*01	IGKJ5*01	19	-	+	-	-	-	ND	ND	-			
IgG	IgG1	Pat TB24	196	IGHV3-30*10	IGHJ4*02	32	EEWVVPNYFDY	kappa	IGKV1-39*01	IGKJ2*02	19	+	-	-	+	-	-	ND	+			
IgG	IgG1	Pat TB33	052	IGHV3-21*01	IGHJ3*01	30	HILGVPGAFHV	kappa	IGKV1-NL1*01	IGKJ2*01	15	+	+	-	-	ND	-	ND	-			
IgG	IgG2	Pat TB 7	317	IGHV3-33*03	IGHJ4*02	12	DYGTGDLAVAGHLDY	lambda	IGLV1-40*01	IGLJ3*02	11	+	-	-	+	-	+	ND	-			
IgG	IgG3	Pat TB 7	070	IGHV4-34*01	IGHJ6*03	19	GSVTDSYYYYIDV	kappa	IGKV1-6*01	IGKJ1*01	9	+	-	-	+	ND	-	ND	-			
IgG	IgG3	Pat TB 7	153	IGHV3-66*02	IGHJ6*02	56	SSLCGDCYSPVYFHYLDI	lambda	IGLV2-23*02	IGLJ1*01	11	+	+	+	ND	ND	+	ND	-			

ND, not determined; SHM, somatic hypermutations; VH, variable segment heavy chain; JH, joining segment heavy chain; VL, variable segment light chain; JL, joining segment light chain.

**Appendix Table S5: Statistical analysis**

	<b>exact p-value</b>	<b>category</b>
<b>Figure 1 A</b> , Mann-Whitney, unpaired, non normal distribution		
MTB lysate, TB versus HD	p < 0.0001	****
Cell membrane, TB versus HD	p < 0.0001	****
CFP, TB versus HD	p=0.0066	**
<b>Figure 1 B</b> , Mann-Whitney, unpaired, non normal distribution		
MTB lysate, TB versus HD	p=0.0006	***
Cell membrane, TB versus HD	p=0.0020	**
CFP; TB versus HD	p=0.1186	ns
<b>Figure 2 E</b> , Mann-Whitney, unpaired, non normal distribution	p < 0.0001	****
<b>Figure 5 B</b> , Mann-Whitney, unpaired, non normal distribution		
IgA vs IgG	p<0.0001	****
<b>Figure 5 D</b> , Mann-Whitney, unpaired, non normal distribution		
IgA vs IgG	P=0.0061	**
<b>Figure 5 E</b> , t-test, non-paired, normal distribution as tested by D'Agostino-Pearson omnibus test		
TB24PB054, IgA vs IgG	P=0.0063	**
TB24PB037, IgA vs IgG	P=0.0079	**
TB33PB129, IgA vs IgG	P=0.0014	**
TB24PB218, IgA vs IgG	P=0.0170	*
HCW1HBMem095, IgA vs IgG	P=0.0017	**
<b>Figure 6 A</b> , Mann-Whitney, unpaired, non normal distribution		
no mAb vs IgA TB24PB037	P=0.0005	***
no mAb vs IgG TB24PB037	P= 0.9119	ns
<b>Figure 7 B</b> , Mann-Whitney, unpaired, non normal distribution		
IgA vs IgG	p<0.0001	****

## Appendix Figure S1 A and B



### Appendix Figure S1. Antigen-reactivity and concentration-dependent effect of monoclonal IgG and IgA antibodies on MTB infection of human lung epithelial cells.

(A) Representative HBHA ELISA data from two independent experiments for the indicated IgA and IgG antibodies and respective isotype controls. (B) Relative bacterial counts (CFU) compared to the medium control (100%) in human lung epithelial A549 cells 1 h after infection with MTB, pre-incubated with the indicated recombinant MTB-reactive antibodies at different concentration of 100  $\mu\text{g/ml}$ , 10  $\mu\text{g/ml}$  and 1  $\mu\text{g/ml}$  (from left to right). Pooled data from one or two independent experiments with two or three technical replicates each. Mean and SD are indicated.